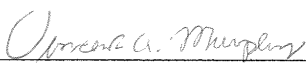


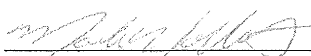
APPENDIX A - Protocol

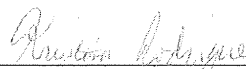


PROTOCOL For STUDY 24070-20


Test Substance: BEHR Antibacterial Paint, #3190
Study Title: ACUTE ORAL TOXICITY (UDP) In RATS
Guideline: OCSPP 870.1100
Test Facility: STILLMEADOW, Inc.
12852 Park One Drive
Sugar Land, TX 77478

Approved:  04 Nov 20
Vincent A. Murphy, PhD, DABT
Study Director, STILLMEADOW, Inc. Date

Approved:  02 Nov 20
Management, STILLMEADOW, Inc. Date

Reviewed:  02 Nov 20
Kristina Rodriguez, RQAP-GLP
Quality Assurance Director, STILLMEADOW, Inc. Date

Sponsor: BEHR Paint Company
1801 E. St. Andrew Place
Santa Ana, CA 92705
714 975 3127
jgilbert@behr.com

Approved:  11/03/2020
John Gilbert
Chief R&D Officer Date

12852 Park One Drive ■ Sugar Land, Texas 77478 ■ 281 240-8828 ■ Fax 281 240-8448
www.stillmeadow.com

A. GENERAL

1. Study Title: Acute Oral Toxicity (UDP) in Rats
2. Purpose: To assess acute oral toxicity potential of test substance when administered by oral route (gavage) to rats.
3. Method Guidelines: This study will be conducted according to US OCSPP 870.1100 (UDP).
4. Regulatory Compliance: This study will be conducted in compliance with Good Laboratory Practice (GLP) standards:
 1. EPA FIFRA 40 CFR 160In the event of a regulatory inspection, Regulatory Inspectors will be provided with all study documentation requested. Sponsor will be notified of inspection of their study. All procedures in this protocol comply with Animal Welfare Act Regulations. All methods can be found in STILLMEADOW, Inc. Standard Operating Procedures (SOP).
5. Quality Assurance: The Quality Assurance Unit (QAU) will review the protocol. Study information will be entered into the master schedule. In-progress inspection(s) will be performed to ensure integrity of the study. Any deviations from SOP, protocol or GLP standards will be reported to Study Director and Management. Raw data and report will be audited, and a statement prepared and signed which will specify dates inspections were made and findings reported to Management and Study Director.
6. Test Substance: BEHR Antibacterial Paint, #3190. Test substance identification should include name, lot/batch number and purity. Sponsor should also provide information regarding safety, storage conditions and disposal. Sponsor assumes responsibility for purity, stability, identity, synthesis methods and location of documentation.
7. Proposed Schedule: Testing should begin after test substance receipt, authorization to conduct study and study initiation.
Proposed Experimental Start & End: 10 Nov 20 - 27 Nov 20
Study will be extended if several dose levels are required.
8. Study Director: Vincent A. Murphy, PhD, DABT
9. Experimental Summary: Test substance will be administered as a limit test to rats orally by gavage. Animals will be observed several times on the day of dosing for mortality and pharmacological and/or toxicological effects, and daily after for 14 days. EPA AOT425 Stat Program will recommend other dose levels (if needed), using up-and-down procedure (UDP), and also calculate LD₅₀ with slope and 95% confidence limits if a main test is conducted.
10. Protocol Amendments: Any protocol alteration will be justified, approved by Study Director and recorded in writing.
11. Sponsor Audits: Sponsor may send an authorized Representative to inspect test system and/or data on STILLMEADOW, Inc. premises during normal working hours.

B. EXPERIMENTAL DESIGN

1. Animals
 - a. Species/Strain/Source: Albino rat / Sprague-Dawley / Texas Animal Specialties; Humble, TX (or other suitable supplier)
 - b. Species Justification: The rat is conventionally used to provide an index of toxicity on which human hazard can be judged, and the species preferred by regulatory agencies.

Protocol for Study 24070-20
Page 3 of 5

- B. 1. c. Quantity & Sex: Up to 5 females (nulliparous & non-pregnant) for limit test; maximum of 15 for main test (or entire test - see B.3.f.)
- d. Age/Weight on Day -1: 8 - 12 week / 175 - 250 g
Weight variation should not exceed $\pm 20\%$ of first animal used
- e. Identification: Ear punch
- f. Acclimation & Health Status: Animals will be acclimated for at least 5 days prior to dosing. Normal weight gain, appearance and behavior will be factors used to select healthy naive animals for testing.
- g. Randomization: No formal randomization procedure will be required; arbitrary selection of one animal at a time from same-source/age group is sufficiently random.
2. Animal Husbandry
- a. No./Cage & Cage Type: Housed individually during study in polycarbonate box with bedding
- b. Enrichment: Provided to each animal during study
- c. Food: Teklad Global Diets® #2018, or equivalent, available ad libitum except during fasting; analyzed by manufacturer for nutritional content
- d. Water: Tap water, available ad libitum (automatic system); municipal water supply analyzed by TCEQ Water Utilities Division
- e. Contaminants: There are no known contaminants in feed or water available to laboratory animals that would be expected to interfere with this study.
- f. Environment: Target temperature: $22^{\circ} \pm 3^{\circ}\text{C}$ Target relative humidity: 30 - 70%
12-hr light/12-hr dark cycle (regulated automatically)
Room ventilation: at least 10 air changes per hour
3. Test Substance Administration
- a. Animal Preparation: Animals will be fasted for at least 16 hours prior to dosing. Food will be made available immediately after dosing.
- b. Reason for Route of Administration: Historically, the oral route has been route of choice for evaluation of toxicity potential of test substance and potential route of human exposure.
- c. Animal Assignment: Animals will be selected so individual pre-fasted body weights will not exceed $\pm 20\%$ weight of first animal used.
- d. Test Substance Preparation: Test substance will be administered as received, if possible, or diluted in appropriate vehicle (aqueous solution/suspension when possible) to the most concentrated workable dilution. Aerosol substance will be discharged into a container and administered as a liquid. All animals in a dose group will receive the same concentration of test substance. Maximum dose volume will not exceed 1 mL/100 g, or for aqueous solutions, 2 mL/100 g. Dosing solutions will be prepared on the day of dosing and stored at room temperature until administration, within 3 hours after mixing.
- e. Dosing: Animals will be dosed by gavage with appropriately sized stainless steel ball-tipped dosing needle and syringe. Individual doses will be calculated based upon animal's body weight on the day of test substance administration.
- f. Dose Level: **Limit Test** (begin): A single dose level of **5000 mg/kg** will be administered to one animal. If mortality occurs, limit test will stop and a main test will be conducted. If no mortality occurs by 24 - 48 hours after first animal is dosed at selected level, limit test will continue as follows.

B. 3. f. (cont.)

5000 mg/kg limit (cont): Two more animals will be dosed at the same time. If both survive, LD₅₀ is greater than 5000 mg/kg and study ends. If at least one animal of the first three dies, an additional animal will be dosed. If exactly two animals of the four die, a fifth (final) will be dosed. If three or more animals die, limit test ends and a main test will be conducted. If less than three animals of the five die, LD₅₀ is greater than 5000 mg/kg and study ends.

Main Test (if done): Starting dose should be one progression factor lower than best estimate of LD₅₀, or 175 mg/kg. Number and spacing of dose levels will be recommended by EPA AOT425 Stat Program (Westat, Acute Oral Toxicity, Guideline 425, Statistical Program, Version 1.0, May 01). Test will consist of dosing a single animal typically every 24 - 72 hours, but no less than 24 hours, at a level higher (if previous survival) or lower (if previous death) at EPA Program default progression factor of 3.2, unless available toxicological information indicates otherwise. Any change in direction of dose progression is a reversal. Main dosing will end (per EPA Program) after 15 animals have been dosed, or 3 animals survive at the upper bound, or five reversals occur in 6 consecutive animals, or at least 4 animals follow the first reversal and specified likelihood-ratios exceed critical value. If needed, animals dosed in the limit test will be used in main test calculations (and included in 15 maximum dosed). EPA Program will compute LD₅₀ with slope and 95% confidence levels.

4. Observations

a. Body Weights:

Body weights will be recorded the day prior to dosing (Day -1), day of dosing (Day 0) and weekly after (Days 7 and 14), or at time of discovery after death.

b. Clinical Signs:

Observations for mortality and pharmacological and/or toxicological effects will be made within 30 min. after dosing, twice more on dosing day, and at least once daily after for 14 days. Nature, onset, severity and duration of all gross or visible pharmacological or toxicological signs will be recorded. Observations include: evaluation of skin, fur, eyes, mucous membranes; respiratory and circulatory effects; autonomic effects such as salivation, lacrimation, excessive urination, diarrhea; central nervous system effects including tremors and convulsions; changes in activity, gait, posture; reactivity to handling or sensory stimuli; altered strength and stereotypies or bizarre behavior (e.g., self mutilation, walking backwards). Animals with significant signs of pain/distress will be observed more often and, if need, given sufficient concentration of suitable analgesic by subcutaneous or IM injection; analgesic will be readministered, if need, at appropriate frequency.

c. Animal Sacrifice:

Animals with signs of severe pain/distress considered irreversible will be humanely euthanized, per Study Director decision. All animals surviving to termination will be euthanized by CO₂ overdose.

d. Necropsy:

Gross necropsy will be conducted on each animal at termination or time of discovery after death, and results recorded (generally only abnormalities if any, or NOA if none). Gross necropsy shall include gross observations of external surfaces; all orifices; and thoracic, abdominal and pelvic cavities.

5. Evaluation of Results:

Unless only a single dose level is tested, LD₅₀ and 95% confidence levels will be calculated using EPA AOT425 Stat Program, which will recommend a starting level, any subsequent levels and termination when a stopping criteria has been met. Toxicity Category may be assigned from LD₅₀.

- B. 6. Test Substance Accountability: A comprehensive inventory of test substance received and used will be kept. Test substance container(s) will be weighed when received at this facility, and all test substance use recorded. Test substance and substance dosing solutions will be stored in original containers or equivalent, or in capped glass containers.
7. Unused Test Substance Disposal: Unused test substance will be disposed of at Sponsor's expense after study termination.
8. Safety Precautions: General safety precautions required by laboratory SOP will be followed. Sponsor will supply basic toxicity data on test substance to be used; however, since toxicity of test substances is often not well characterized, this laboratory will be conservative in setting safety procedures. Sponsor or Representative shall be notified of any exposure requiring physician's exam or care.
- C. DATA MANAGEMENT
1. Records: The following records will be maintained at STILLMEADOW, Inc. during the study, and archived upon study termination:
- a. Protocol & protocol amendments (if any)
 - b. Final report & amendments (if any)
 - c. Study correspondence
 - d. Animal receipt/acclimation data
 - e. Test substance receipt, identification supplied by Sponsor, preparation, administration, disposition
 - f. Test animal information: number, sex, source, strain
 - g. Body weight data
 - h. Daily observation data of pharmacological &/or toxicological signs
 - i. Mortality data & gross necropsy findings
 - j. Results of EPA Program
 - k. Other pertinent data
2. Data Storage: All raw data, originals of protocol, final report, any amendment(s) and a test substance sample will be archived at STILLMEADOW, Inc. for 15 years.
3. Data Reporting: Final report will include following data as described in GLP standards:
- a. Statement from QAU
 - b. GLP Compliance Statement & signature of Study Director
 - c. Names of scientific personnel involved in study
 - d. Dates of study initiation & termination
 - e. Identification, label information, description, preparation, storage of test substance
 - f. All pertinent animal data & husbandry, dosing information, observation methods
 - g. Description of test procedures
 - h. Results of EPA Stat Program, if used
 - i. Individual body weights
 - j. Observations on nature, onset, severity & duration of all gross or visible pharmacological &/or toxicological signs; nonroutine findings will be addressed in a discussion section
 - k. Individual mortality data & gross necropsy findings
 - l. Copy of this protocol; deviations (if any) & impact on study
4. Report Generation: A final report will be generated after termination of in-life portion of the study; a draft report may first be issued for Sponsor approval.